

JORGE L. PINEDA
Curriculum Vitae

Personal Date of Birth: March 15, 1979 (Santiago, Chile)
 Nationality: Chilean

Profesional Experience

NASA JET PROPULSION LABORATORY
 CALIFORNIA INSTITUTE OF TECHNOLOGY
 Pasadena, California, USA
 Caltech Postdoctoral Scholar

Mar. 2010 – Present

NASA JET PROPULSION LABORATORY
 CALIFORNIA INSTITUTE OF TECHNOLOGY
 Pasadena, California, USA
 NASA Postdoctoral Program Fellow

Mar. 2008 – Mar. 2010

ANGELANDER INSTITUT FUER ASTRONOMIE (UNIVERSITY OF BONN)
 Bonn, Germany
 Postdoctoral Researcher

Jun. 2007 – Feb. 2008

Education ANGELANDER INSTITUT FUER ASTRONOMIE (UNIVERSITY OF BONN) AND
 MAX PLANCK INSTITUTE FUER RADIOASTRONOMIE
 Bonn, Germany
 Ph.D. in Astronomy
 Dissertation: “Properties of the Molecular Gas in Low Metallicity Environments”
 Thesis Advisors: Prof Dr. Ulrich Klein, Dr. Frank Bensch

Jan. 2004 – Jun. 2007

UNIVERSITY OF CHILE
 Santiago, Chile
 M.S. in Astronomy

Mar. 2002 – Oct. 2003

UNIVERSITY OF CHILE
 Santiago, Chile
 B.S. in Physics and Astronomy

Mar. 1998 – Nov. 2002

COLEGIO SALESIANO MANUEL ARRIARÁN BARROS
 Santiago, Chile
 Primary and Secondary School.

Mar. 1984 – Nov 1996

Honors and Awards NASA Group Achievement Award

Jun. 2010

NASA Postdoctoral Program Fellow

Mar. 2008 – Mar. 2010

Mar. 2002 – Oct 2003

Grant MECESUP UCH0118 given by the Chilean Ministry of Education
for M.S. Studies.

Working Experience	PROPOSAL REFEREE FOR THE JCMT TELESCOPE	2005
	MOPRA OBSERVATIONS & DATA REDUCTION experience on MOPS observations & data reduction.	2005-2006
	KOSMA OBSERVATIONS & DATA REDUCTION	2004-2006
	CBI OBSERVATIONS & DATA REDUCTION	2002-2003
	JCMT AND IRAM 30M DATA REDUCTION	2004-2006
	STUDY OF THE CO EMISSION IN THE NORMA SPIRAL ARM WITH NANTEN advised by Leonardo Bronfmann	2001
	DETECTION OF GALAXY CLUSTERS USING VORONOI TESSELATIONS advised by Luis Campusano	2001
	TOMOGRAPHY OF FOSSIL SAMPLES in the Chilean Commission of Nuclear Energy, advised by Claudio Tenreiro	2001
Teaching Experience	TEACHING ASSISTANT, UNIVERSITY OF CHILE Statistical Physics.	2001
	TEACHING ASSISTANT, UNIVERSITY OF CHILE Contemporary Physics.	2001
	TEACHING ASSISTANT, UNIVERSITY OF CHILE Physics Summer School for High School Students.	2001
Computer Skills	<p>Working knowledge of Unix/Linux, Windows, C, Fortran, Perl, shell scripting languages (sh, csh), IDL, gnuplot, L^AT_EX. Familiar with image and data analysis packages such as GILDAS, DIFMAP, KARMA, MIRIAD, ASAP, HIPE.</p>	
Conferences Attended	<p>214TH AAS MEETING Jun. 2009 Pasadena, California Poster: Molecular Diagnostics of the Internal Motions of Massive Cores.</p> <p>213TH AAS MEETING Jan. 2009 Long Beach, California Poster: The Relation Between Gas and Dust in the Taurus Molecular Cloud.</p> <p>ANNUAL MEETING OF THE ASTRONOMISCHE GESELLSCHAFT (AG) Sep., 2007</p>	

Würzburg, Germany

Talk: Large Scale Mapping of Molecular Gas in the Vicinity of 30 Doradus in the Large Magellanic Cloud.

Poster: Photon Dominated Region Modelling of Barnard 68.

MOLECULES IN SPACE AND LABORATORY.

May 2007

Paris, France.

Poster: Testing spherical PDR models: B68 as an example of an (almost perfect) spherical clump in the diffuse Galactic radiation field.

SCIENCE WITH ALMA: A NEW ERA FOR ASTROPHYSICS.

Nov., 2006

Madrid, Spain.

THE MAGELLANIC CLOUDS AND DSPPH SATELLITES: A NEARBY LABORATORY FOR GALAXY EVOLUTION.

Apr., 2006

Vienna, Austria.

Talk: Large Scale Mapping of Molecular Gas in the Vicinity of 30 Doradus in the Large Magellanic Cloud.

ANNUAL MEETING OF THE ASTRONOMISCHE GESELLSCHAFT (AG)

Sep., 2005

Cologne, Germany

Talk: Submillimeter Line Emission from LMC N159W: a Dense, Clumpy PDR in a Low Metallicity Environment

Poster: Wide-field Mapping of Molecular Gas in Southern Starburst Galaxies.

IAU SYMPOSIUM 231: ASTROCHEMISTRY RECENT SUCCESSES AND CURRENT CHALLENGES

Sep., 2005

Asilomar, USA

Poster: Photon Dominated Region Modelling of Barnard 68.

YOUNG EUROPEAN RADIOASTRONOMY CONFERENCE 2004 (YERAC)

Sep., 2004

Cork, Ireland

Talk: "CI measurements in metal-poor environments"

Schools

ASTRONOMY IN THE SUBMILLIMETER AND FAR INFRARED DOMAINS WITH THE HERSCHEL SPACE OBSERVATORY

May, 2007

Les Houches, France

MOPRA INDUCTION WEEKEND

May, 2005

Mopra Telescope, Australia

IRAM MILLIMETRIC INTERFEROMETRY SUMMER SCHOOL

Nov., 2004

Grenoble, France

- Refereed Publications**
- A SAMPLE OF [C II] CLOUDS TRACING DENSE CLOUDS IN WEAK FUV FIELDS
J. L. Pineda, Velusamy,T., Langer, W. D., Goldsmith, P. F., Li. D. & Yorke, H.W. 2010. *A&A*, 521, L19
 - DETECTION OF WARM DARK GAS IN DIFFUSE CLOUDS
Langer, W. D., Velusamy,T., **J. L. Pineda**, Goldsmith, P. F., Li. D. & Yorke, H.W. 2010. *A&A*, 521, L17
 - [C II] OBSERVATIONS OF H₂ MOLECULAR LAYERS IN TRANSITION CLOUDS
Velusamy,T., Langer, W. D., **J. L. Pineda**, Goldsmith, P. F., Li. D. & Yorke, H.W. 2010. *A&A*, 521, L18
 - THE RELATION BETWEEN DUST AND GAS IN THE TAURUS MOLECULAR CLOUD
Pineda, J.L., Goldsmith, P.F., Chapman, N.L., Li, D., Snell, R., Cambrésy, L. & Brunt, C. 2010. *ApJ*, 721, 686
 - THE UPTAKE OF INTERESTELLAR GASEOUS CO INTO ICY GRAIN MANTLES IN A QUIESCENT DARK CLOUD
Whittet D.C.B., Goldsmith, P.F., **Pineda, J.L.**, 2010. *ApJ*, 720, 259
 - DO LOGNORMAL COLUMN-DENSITY DISTRIBUTIONS IN MOLECULAR CLOUDS IMPLY SUPERSONIC TURBULENCE?
Tassis, K.; Christie, D. A.; Urban, A.; **Pineda, J. L.**; Mouschovias, T. Ch.; Yorke, H. W.; Martel, H. 2010. *MNRAS*, 1217
 - SUPERNOVA REMNANTS AND STAR FORMATION IN THE LARGE MAGELLANIC CLOUD
Desai, K. M.; Chu, Y. -H.; Gruendl, R. A.; Dluger, W.; Katz, M.; Wong, T.; Chen, C. -H. R.; Looney, L. W.; Hughes, A.; Muller, E.; Ott, J.; **Pineda, J. L.**. 2010 *AJ*, 140, 584
 - DUST/GAS CORRELATIONS FROM HERSCHEL OBSERVATIONS
Roman-Duval, J. [21 authors], **Pineda, J.L.**, [2 authors] 2010. *A&A*, 518, L74
 - PHYSICAL PROPERTIES OF GIANT MOLECULAR CLOUDS IN THE LARGE MAGELLANIC CLOUD
Hughes, A.; Wong, T.; Ott, J.; Muller, E.; **Pineda, J. L.** et al. 2010, *MNRAS*, 873
 - CHARACTERIZING THE LOW-MASS MOLECULAR COMPONENT IN THE NORTHERN SMALL MAGELLANIC CLOUD
Muller, E., Ott, J., Hughes, A., **Pineda, J. L.**, & Wong, T. 2009, *ApJ*, submitted.
 - WARM AND DENSE MOLECULAR GAS IN THE N159 REGION: 12CO J=4-3 AND 13CO J=3-2 OBSERVATIONS WITH NANTEX2 AND ASTE
Mizuno, Y., [9 authors], **Pineda, J.L.**, [21 authors], 2009, *PASJ* 61, 51
 - THE INFLUENCE OF FAR-ULTRAVIOLET RADIATION ON THE PROPERTIES OF MOLECULAR CLOUDS IN THE 30 DOR REGION OF THE LARGE MAGELLANIC CLOUD
Pineda, J. L., Ott, J., Klein, U., Wong, T., Muller, E., & Hughes, A. 2009, *ApJ*, 703, 736
 - MOLECULAR AND ATOMIC GAS IN THE LARGE MAGELLANIC CLOUD. I. CONDITIONS FOR CO DETECTION
Wong, T., [6 authors], **Pineda, J.L.**, [5 authors] *ApJ*, 696, 370
 - THE MOLECULAR RIDGE CLOSE TO 30 DORADUS IN THE LARGE MAGELLANIC CLOUD
Ott, J, Wong, T, **Pineda, J.L.** et al. *PASA*, 25, 129
 - SUBMILLIMETER LINE EMISSION FROM LMC N159W: A DENSE, CLUMPY PDR IN A LOW METALICITY ENVIRONMENT
Pineda, J.L., Mizuno,N., Stutzki, J., Cubick,M., et al. 2008 *A&A* , 482, 197

PHOTON-DOMINATED REGION MODELING OF THE CO AND [CI] LINE EMISSION IN BARNARD 68
Pineda, J. L., & Bensch, F. 2007 *A&A*, 470, 615

^{12}CO 4-3 AND [CI] 1-0 AT THE CENTERS OF NGC 4945 AND CIRCINUS
HITSCHFELD, M. [22 AUTHORS], **Pineda, J.L.**, [9 AUTHORS] 2008, *A&A*, 479, 75

CLUMPY PHOTON-DOMINATED REGIONS IN CARINA. I. [C I] AND MID-J CO LINES IN TWO 4'ENW4' FIELDS

KRAMER, C., [24 AUTHORS], **Pineda, J.L.**, [7 AUTHORS] 2008, *A&A*, 477, 547.

SUB-MILLIMETER OBSERVATIONS OF GIANT MOLECULAR CLOUDS IN THE LMC: TEMPERATURE AND DENSITY AS DETERMINED FROM $J = 3 \rightarrow 2$ AND $J = 1 \rightarrow 0$ TRANSITIONS

MINAMIDANI, T., [14 AUTHORS], **Pineda, J. L.**, [12 AUTHORS], 2006 *ApJS*, 175, 485

AN UPPER LIMIT ON ANOMALOUS DUST EMISSION AT 31 GHz IN THE DIFFUSE CLOUD [LPH96]
 $201.663+1.643$

DICKINSON, C., CASASSUS, S., **Pineda, J. L.**, PEARSON, T. J., READHEAD, A. C. S., & DAVIES, R. D. 2006, *ApJL*, 643, L111

Non-Refereed Publications MAGMA: MOLECULAR GAS PROPERTIES OF THE LARGE AND SMALL MAGELLANIC CLOUDS
OTT, J., WONG, T., HUGHES, A., **Pineda, J L..**, & MULLER, E. 2009, IAU XXVII GENERAL ASSEMBLY, RIO DE JANEIRO, BRAZIL, POSTER PRESENTATION.

THE CORRELATION BETWEEN CO AND HI EMISSION IN THE LARGE MAGELLANIC CLOUD
WONG, T., FUKUI, Y., KAWAMURA, A., MIZUNO, N., HUGHES, A., OTT, J., MULLER, E., **Pineda, J. L.**, STAVELEY-SMITH, L., KIM, S., MIZUNO, Y., & MURAI, M. 2008, IAU SYMPOSIUM 256: "THE MAGELLANIC SYSTEM: STARS, GAS, AND GALAXIES", (KEELE, UK), POSTER PRESENTATION.

PROPERTIES OF LMC MOLECULAR CLOUDS FROM MAGMA, THE MAGELLANIC MOPRA ASSESSMENT

HUGHES, A., WONG, T., MULLER, E., **Pineda, J. L.**, OTT, J., & THE MAGMA COLLABORATION 2008, IAU SYMPOSIUM 256: "THE MAGELLANIC SYSTEM: STARS, GAS, AND GALAXIES", (KEELE, UK), POSTER PRESENTATION.

SUB-MM OBSERVATIONS OF GMCs IN THE SMC WITH NANTEN2

MIZUNO, N. [3 AUTHORS], **Pineda, J.L.**, [13 AUTHORS] IAU SYMPOSIUM 256: "THE MAGELLANIC SYSTEM: STARS, GAS, AND GALAXIES", (KEELE, UK), ORAL PRESENTATION.

MOLECULAR CLOUD AND STAR FORMATION NEAR THE VIGOROUSLY STAR FORMING 30 DORADUS REGION IN THE LARGE MAGELLANIC CLOUD

OTT, J., **Pineda, J. L.**, WONG, T., HUGHES, A., & MULLER, E. 2008, IAU 255: "LOW-METALLICITY STAR FORMATION: FROM THE FIRST STARS TO DWARF GALAXIES", ORAL CONTRIBUTION.

THE MOLECULAR RIDGE SOUTH OF 30 DORADUS: A MOPRA AND ATCA ENDEAVOUR
OTT, J., WONG, T., **Pineda, J.L.**, HUGHES, A., & MULLER, E. 2007, "ELIZABETH AND FREDERICK WHITE CONFERENCE ON THE MAGELLANIC SYSTEM" (SYDNEY, AUSTRALIA), ORAL PRESENTATION.

THE MAGELLANIC MOPRA MOLECULAR LINE SURVEY

MULLER, E., HUGHES, A., OTT, J., WONG, T., & **Pineda, J.L.** 2006, "THE MAGELLANIC CLOUDS AND DSPh SATELLITES: A NEARBY LABORATORY FOR GALAXY EVOLUTION" CONFERENCE (VIENNA, AUSTRIA), POSTER PRESENTATION.

MAPPING MOLECULAR GAS IN THE MAGELLANIC CLOUDS

OTT, J., **Pineda, J.L.**, WONG, T., HUGHES, A., & MULLER, E. 2006, "IAU GENERAL ASSEMBLY; SYMPOSIUM S237 TRIGGERED STAR FORMATION IN A TURBULENT ISM" (PRAGUE, CZECH REPUBLIC) POSTER PRESENTATION.

TESTING SPHERICAL PDR MODELS: BARNARD 68 AS EXAMPLE OF AN (ALMOST) PERFECT SPHERICAL CLUMP IN THE DIFFUSE GALACTIC RADIATION FIELD

Pineda, J. L., BENSCH, F. 2007, MOLECULES IN SPACE AND LABORATORY, MEETING HELD IN PARIS, FRANCE, MAY 14-18, 2007. EDITORS: J.L. LEMAIRE, F. COMBES. PUBLISHER: S. DIANA., P.35.

MAPPING MOLECULAR GAS IN THE MAGELLANIC CLOUDS

OTT, J., **Pineda, J. L.**, WONG, T., HUGHES, A., & MULLER, E. 2006, IAU SYMPOSIUM, 237

SHINING A BRIGHT LIGHT ON COLD GAS IN THE MAGELLANIC CLOUDS.

OTT, J., **Pineda, J.**, WONG, T., HUGHES, A., & MULLER, E. SCIENCE HIGHLIGHT IN "ATNF ANNUAL REPORT 2005", P 32

LARGE SCALE MAPPING OF MOLECULAR GAS IN THE VICINITY OF 30 DORADUS IN THE LARGE MAGELLANIC CLOUD

Pineda, J. L., OTT, J., WONG, T.; HENKEL, C.; FUKUI, Y.; KLEIN, U. ET AL. 2005, ASTRONOMISCHE NACHRICHTEN, 326, 528

PHOTON DOMINATED REGION MODELLING OF BARNARD 68.

Pineda, J. L., & BENSCH, F. 2005, ASTRONOMISCHE NACHRICHTEN, 326, 664

PHOTON DOMINATED REGION MODELLING OF BARNARD 68.

Pineda, J. L., & BENSCH, F. 2005, IAU SYMPOSIUM, 231, 55